

(c)

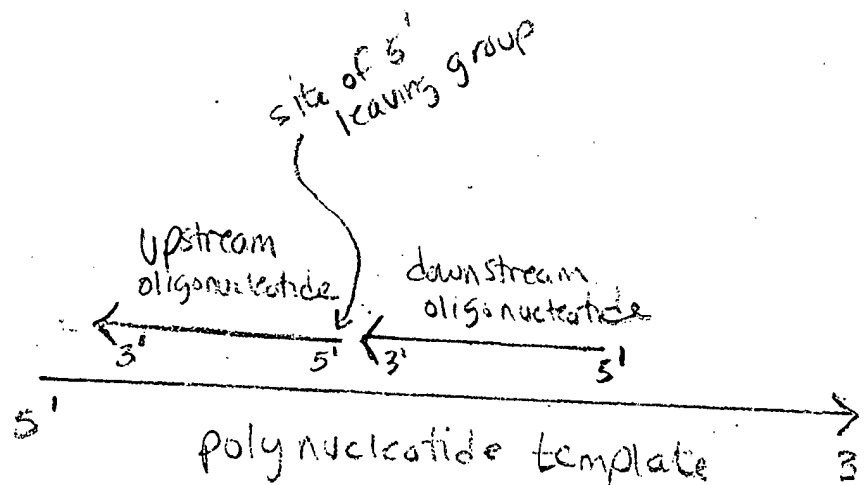


Fig. 1

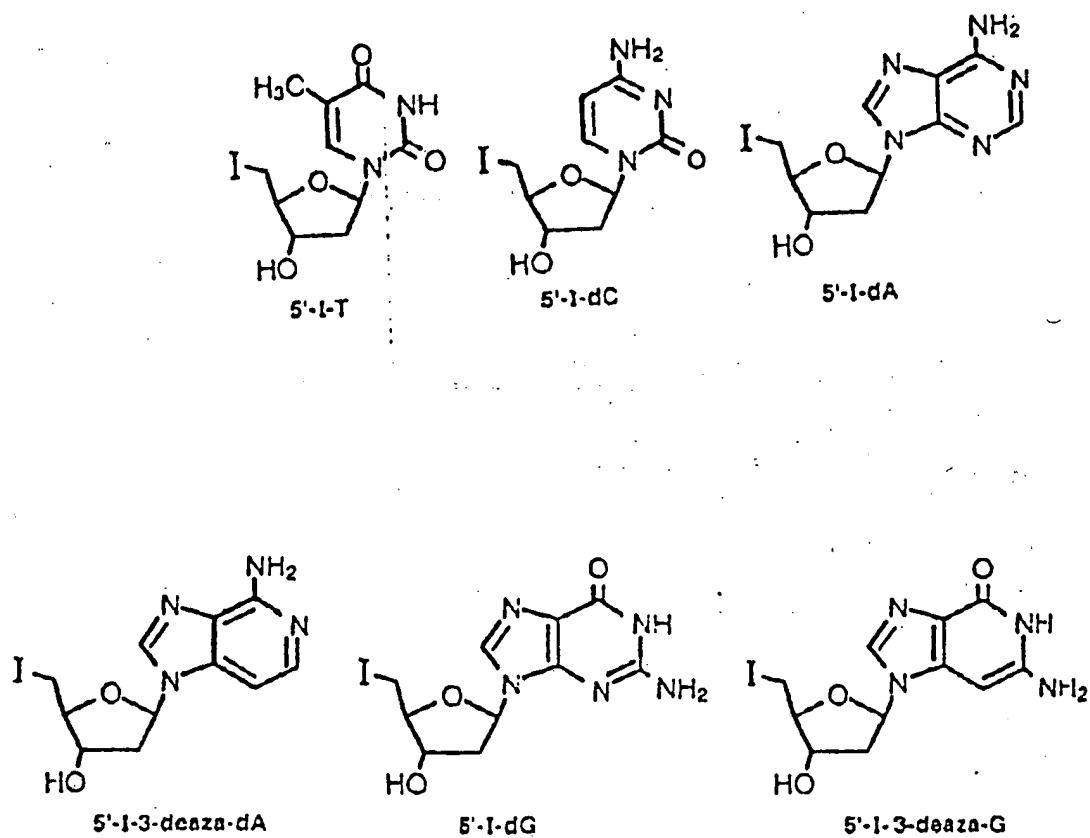


Fig. 2

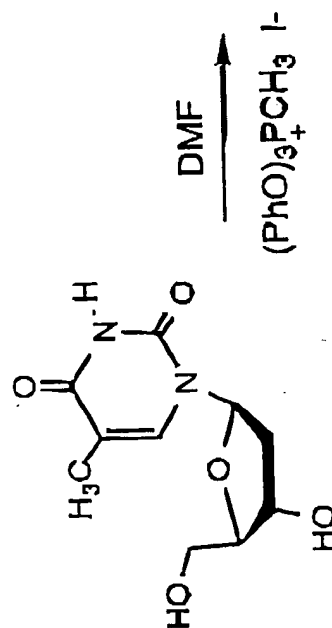
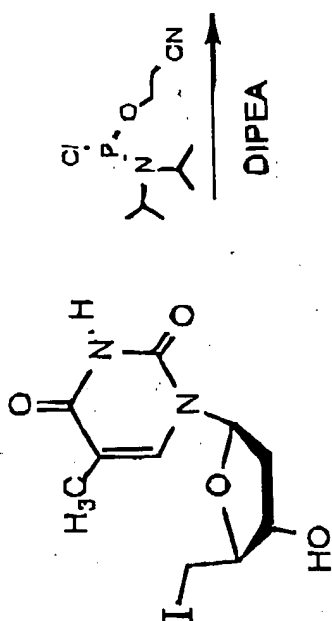
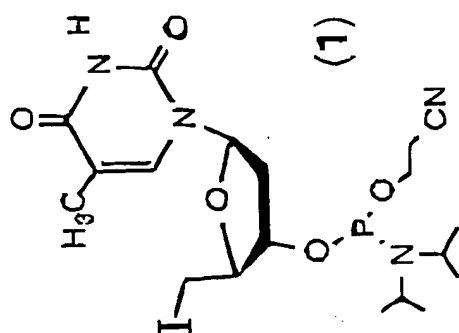
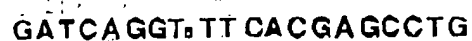
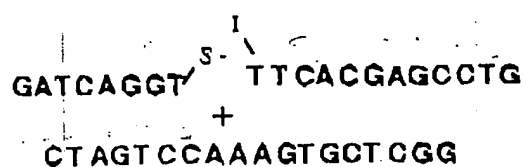
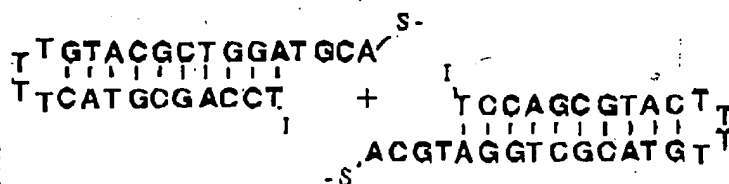


Fig. 3

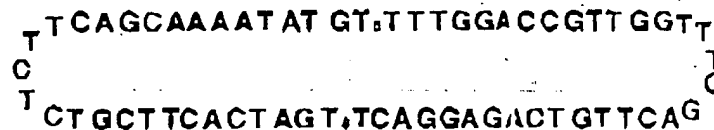
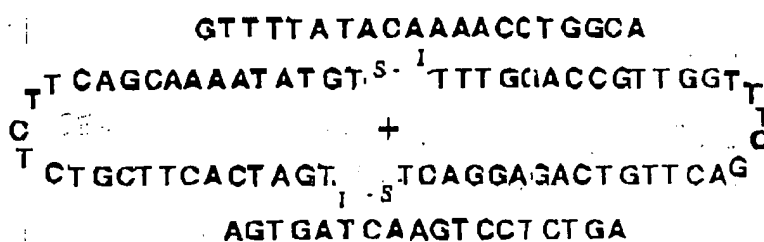
(a) ligation of ssDNA



ligation of duplex DNA



one pot ligation / cyclization of ssDNA



(b)

<u>rxn. type</u>	<u>conversion</u>	<u>isolated yield</u>
ssDNA ligation	>90%	44%
duplex ligation	75%	36%
ligation/cyclization	>90% (1st step) 50% (2nd step)	20%

Fig. 4

00483337-01400

exonuclease / hydrolysis susceptibility

5'-GATCAGGT_pTTCACGAGCCTG-3'

endonuclease susceptibility

T^TGTACGCTGGATGCA_pTCCAGCGTACT^TT
T_TCATGCGACCT_pACGTAGGTCGCATG_TT

template for replication / transcription

5'-TAATACGACTCACTATA

3'-ATTATGCTGAGTGATATCCTGCCTATTCCGAGCACTT_pTGGACTAG

Fig. 5

004833-01400

0048337-04400

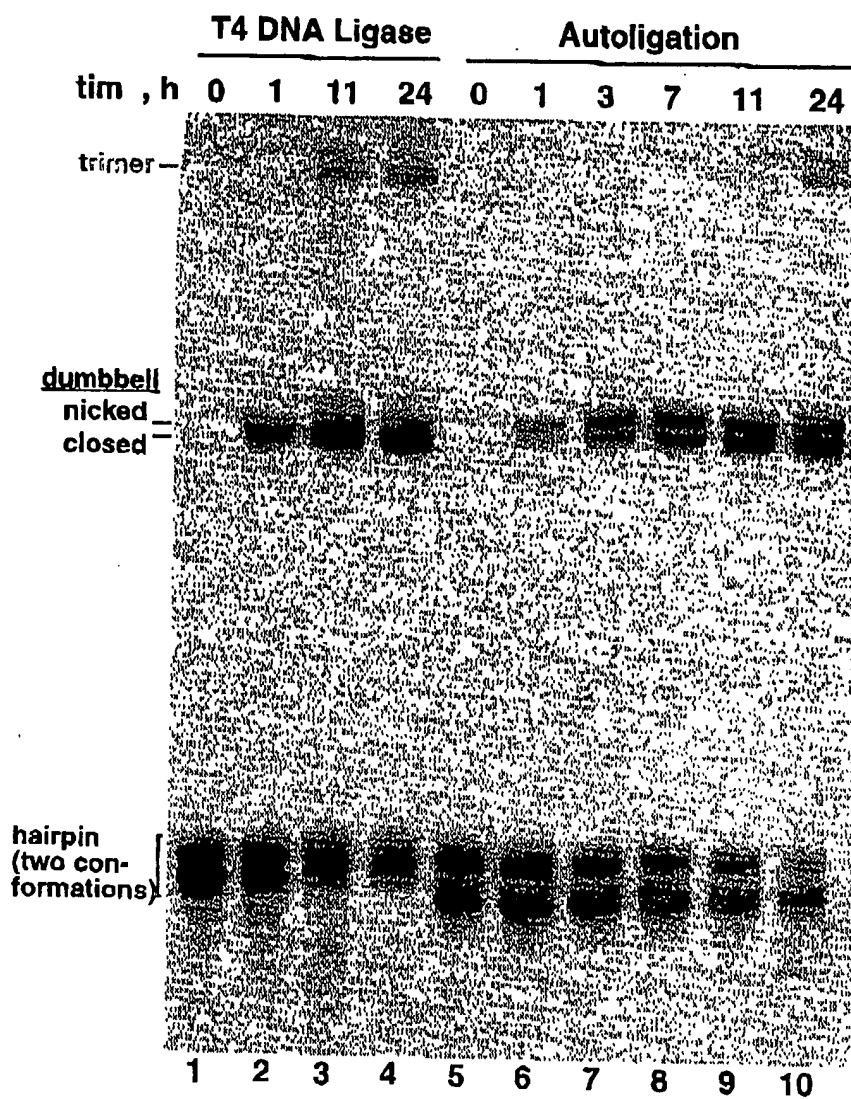


Fig. 6

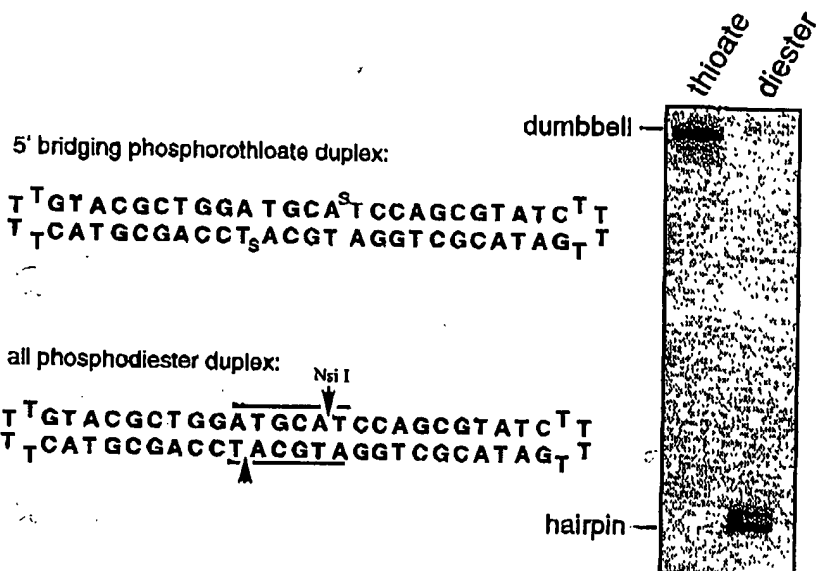


Fig. 7

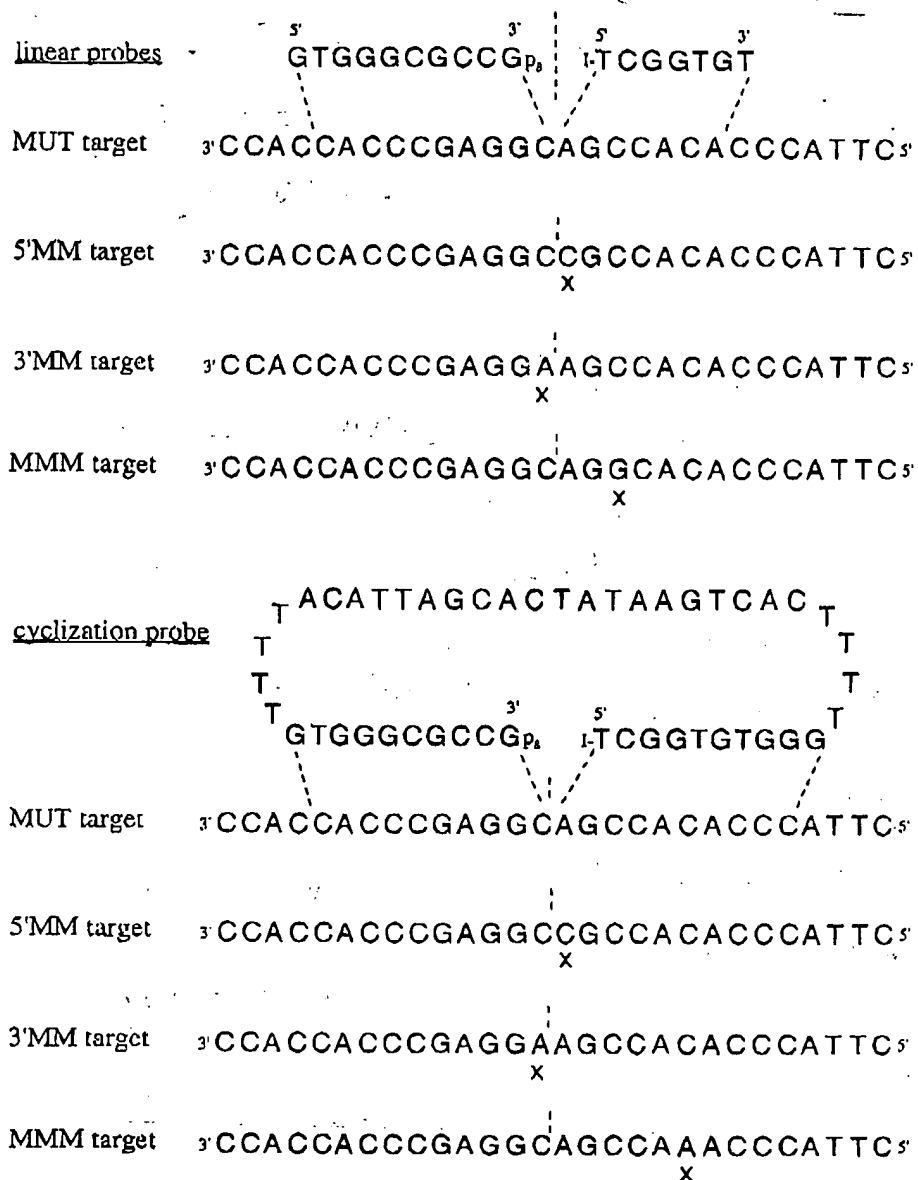


Fig. 8

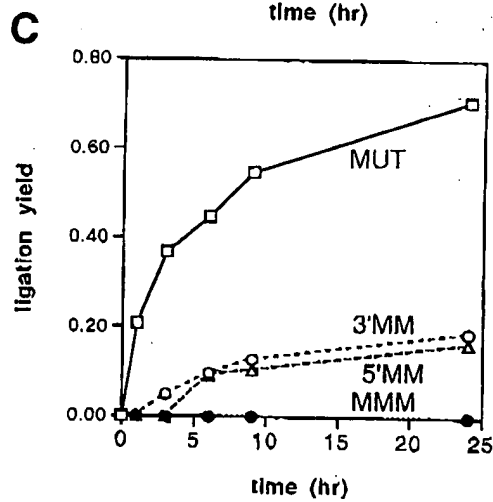
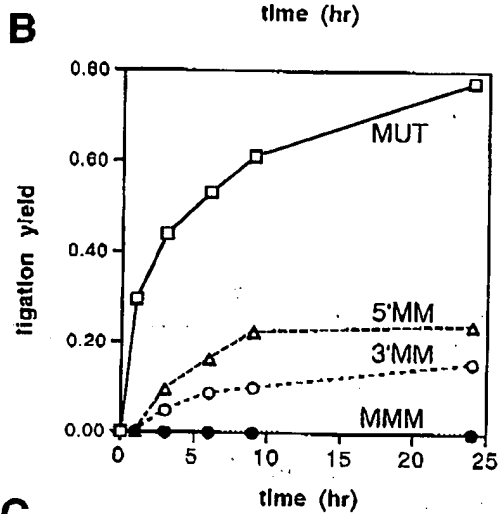
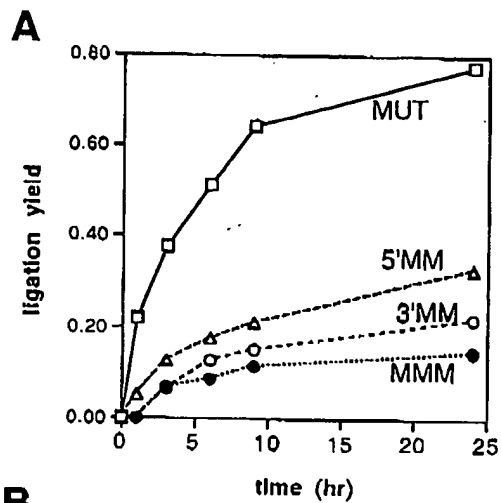


Fig. 9

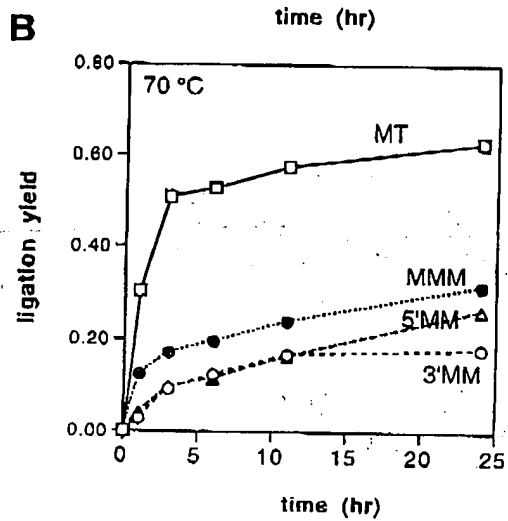
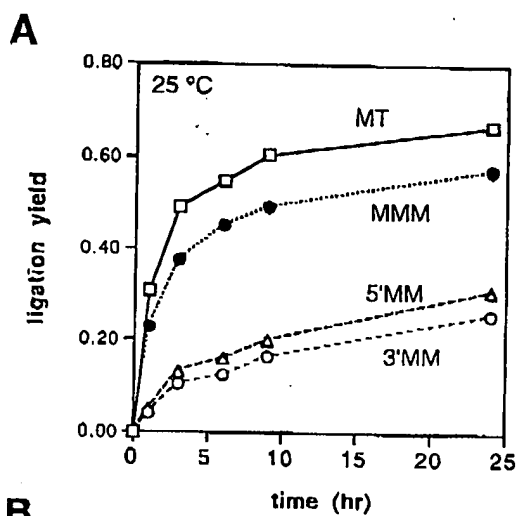
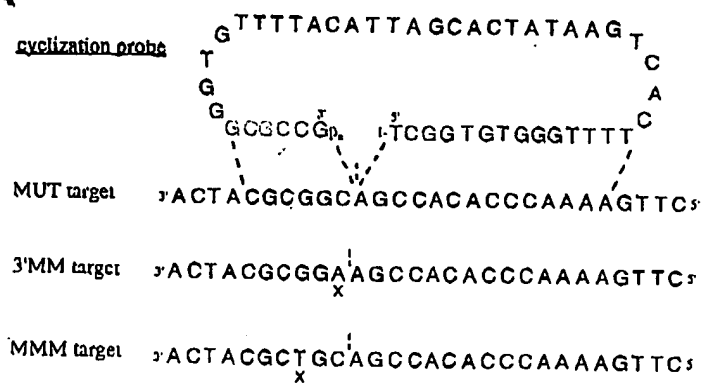


Fig. 10

A



B

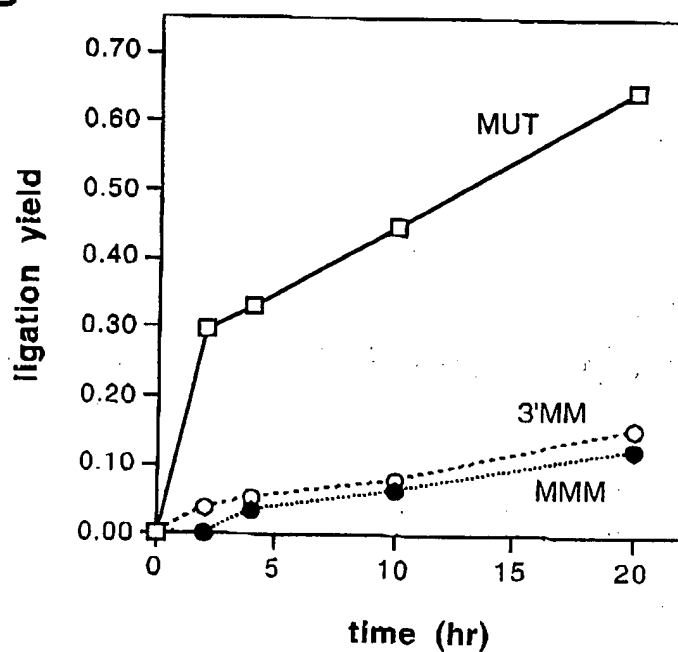
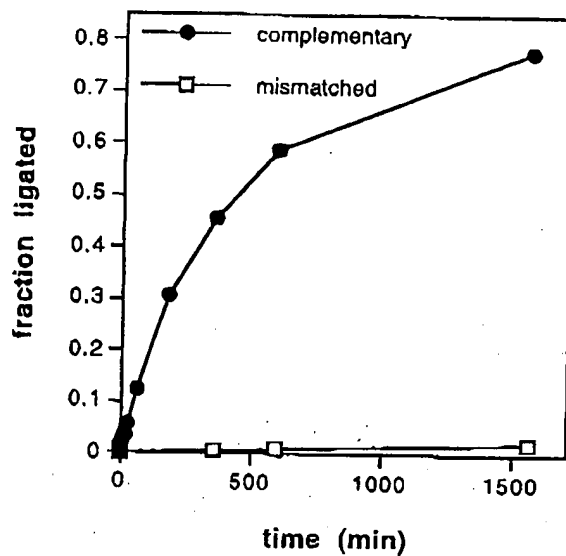


Fig. 11

A



B



C

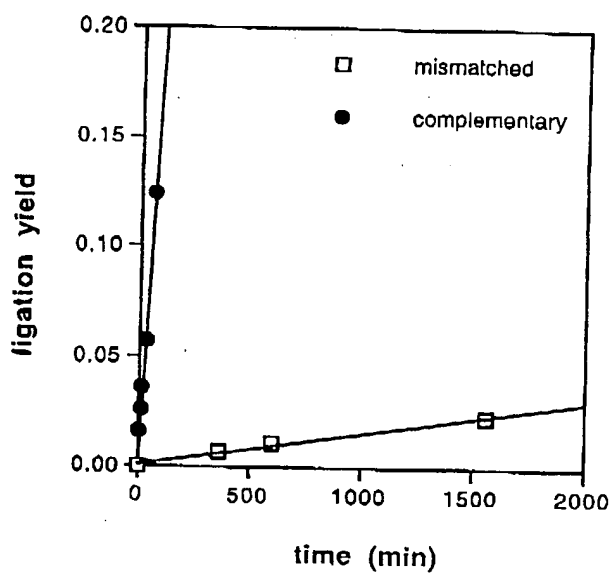


Fig. 12

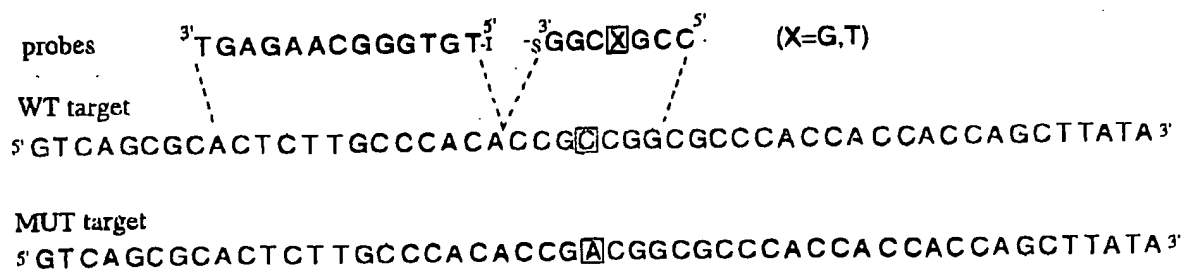


Fig. 13

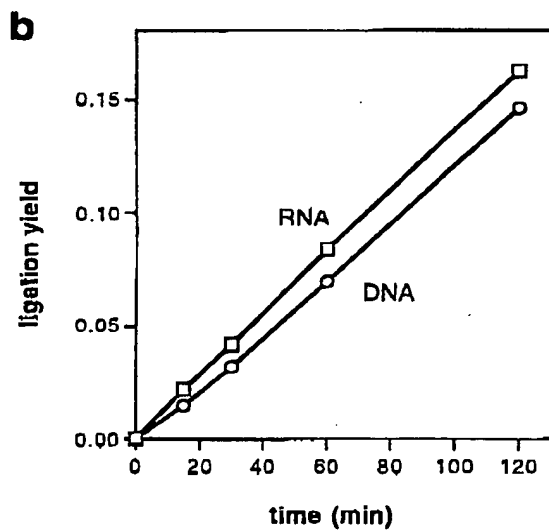
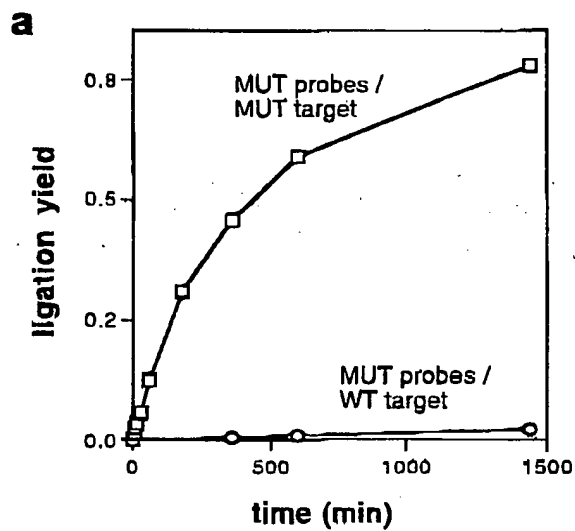


Fig. 14

(a)

temperature (°C)	[target] (nM)	fold turnover	
		no cycling ^a	cycling ^b
22	1	24	--
	10	1.6	1.0
	100	1.0	1.0
27	1	13	14
	10	1.6	3.0
	100	1.2	1.2
32	1	40	51
	10	4.6	4.7
	100	2.3	2.3
37	1	30	44
	10	5.9	6.2
	100	2.2	2.2

^aSimple incubation of 10 μ M probes with target for 24 hr followed by gel electrophoresis and quantitation of ligated product.

^b24 hr of thermal cycling (30 min at temp. shown followed by 45 sec at 95 °C).

(b)

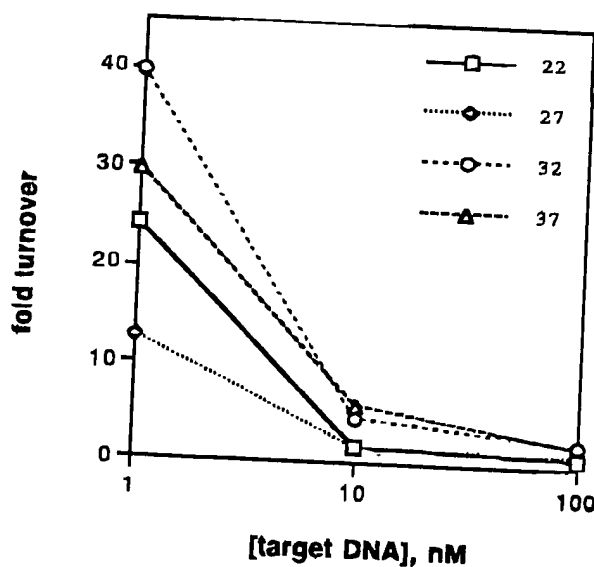


Fig. 15

00410-26680

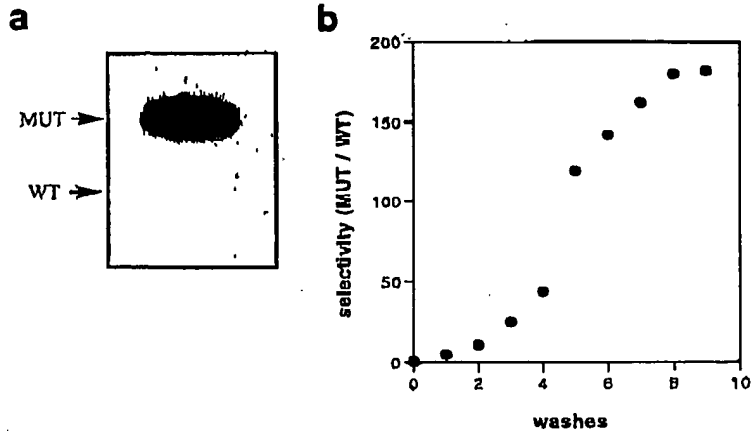


Fig. 16

00460 48440

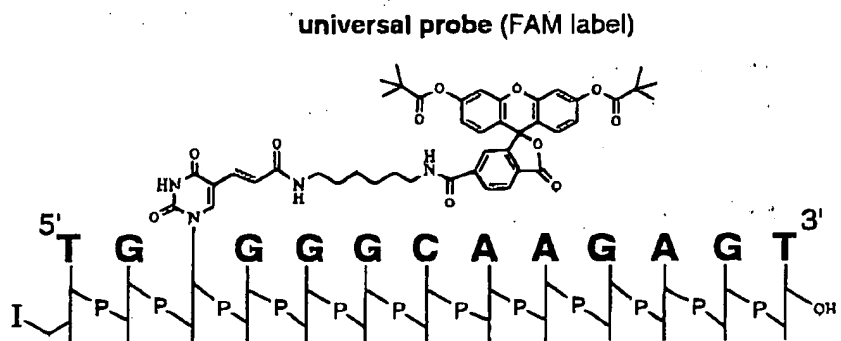
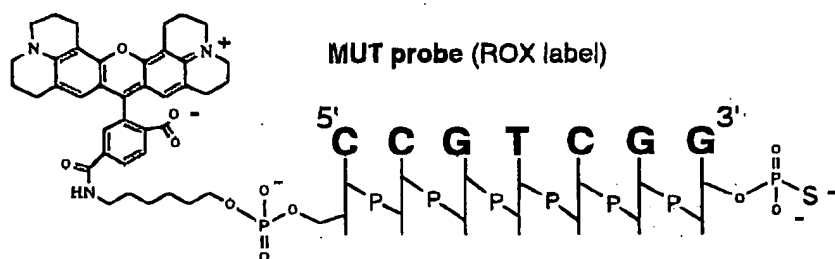
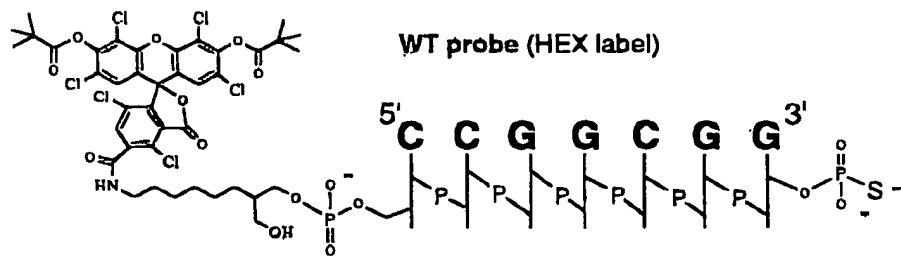


Fig. 17

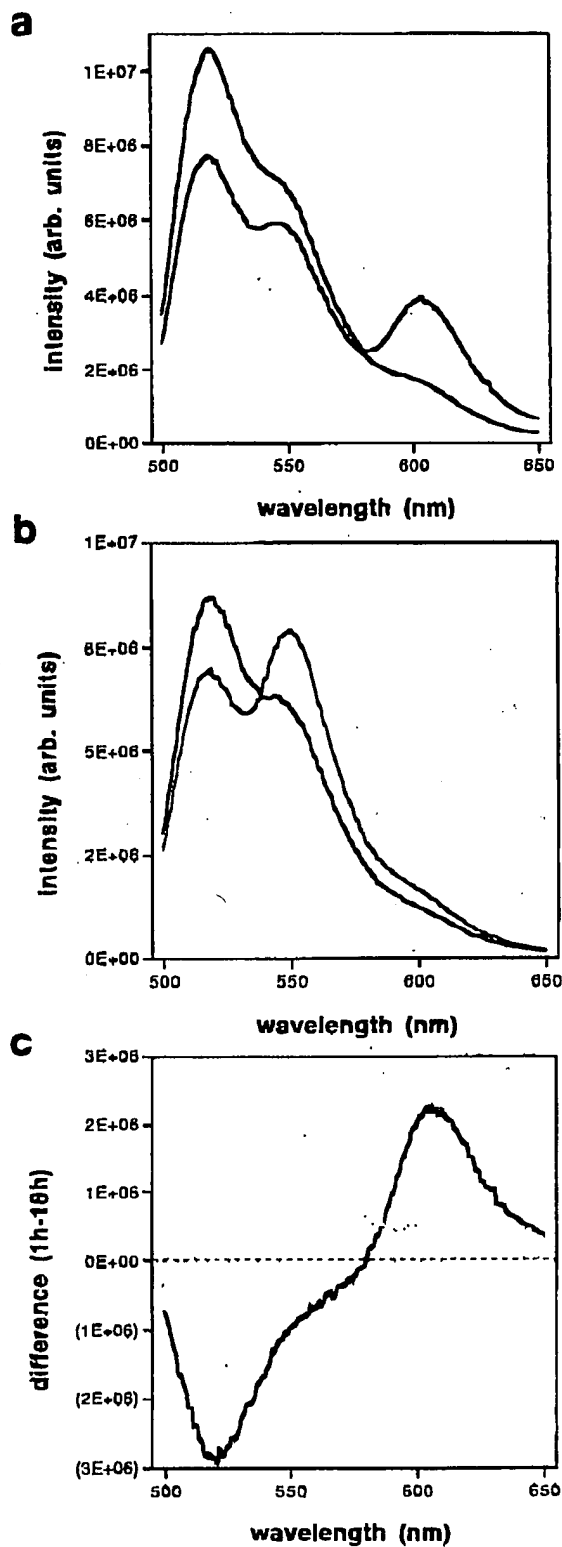


Fig. 18

probes $3' \text{ TGAGAACGGGTGT-}^5'$ $3' \text{ SeGGC} \square \text{GCC}^5'$ (X=G,T)
 WT target
 $5' \text{ GTCAGCGCACTCTTGCCCAACACCG} \square \text{CGGCGCCACCAACCACCAGCTTATA} 3'$
 MUT target
 $5' \text{ GTCAGCGCACTCTTGCCCAACACCG} \square \text{CGGCGCCACCAACCACCAGCTTATA} 3'$
 MUT RNA target
 $5' \text{ GCGCACUCUUGCCCAACACCG} \square \text{CGGCGCC} 3'$

Fig. 19

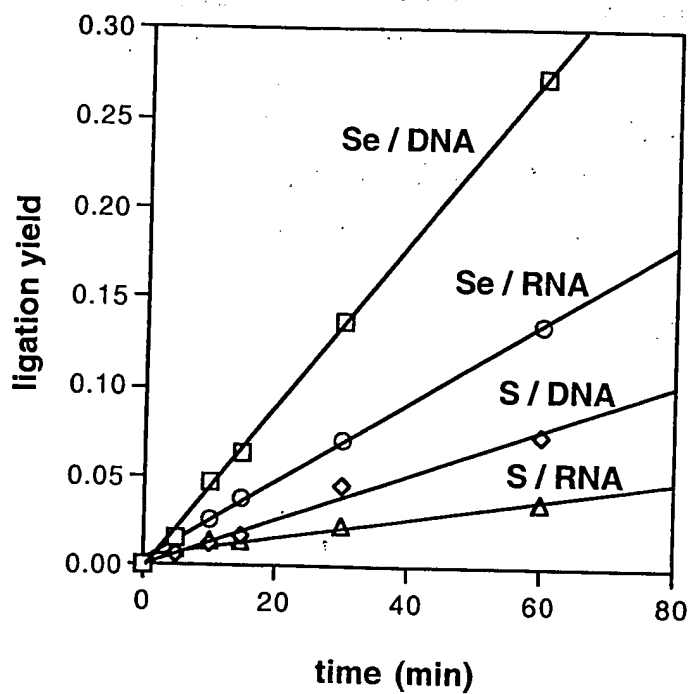


Fig. 20

00470-2228160

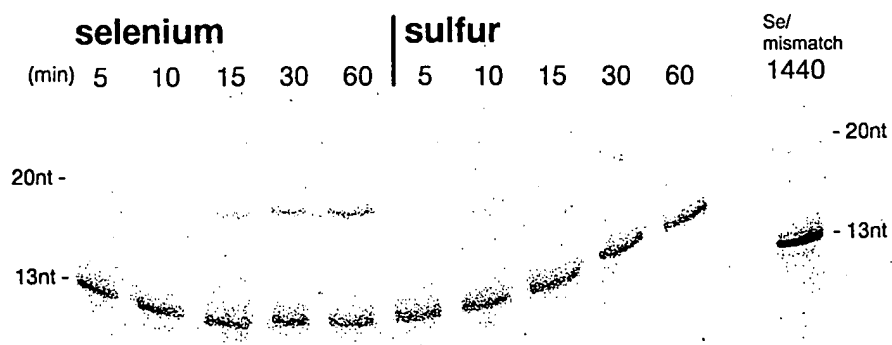


Fig. 21